Exhibit A

City of Philadelphia
Department of Public Health
Air Management Services

PLAN APPROVAL

Approval No: IP17-000074 Date: December 20, 2017
Plant ID: 01569

Owner : Philly Shipyard, Inc.
Address: 2100 Kitty Hawk Avenue
Philadelphia, PA 19112

Source: Philly Shipyard, Inc.
Location: 2100 Kitty Hawk Avenue
Philadelphia, PA 19112

Attention: Carl Danley, HSE Director
Phone: (215) 599-3020
Email: Carl.danley@phillyshipyard.com

Pursuant to the provisions of Title 3 of the Philadelphia Code, the Air Management Code of February 17, 1995, as amended, and after due consideration of a plan approval application received under the rules and regulations of the Philadelphia Air Pollution Control Board, the City of Philadelphia, Department of Public Health, Air Management Services (AMS) December 20, 2017 approved plans for the installation, modification, and temporary operation of the air contamination device(s) described below:

- Modification of Painting Operations of P-29A, P-29B (two indoor Paint Halls), Dry Dock Painting (P-31), Dry Dock Blasting Operations (P-32) and Blasting Operations of the Paint Halls (P-30A, P-30B, P-30C). Modification includes the following;
    - Installation of a new Paint Hall (Paint Hall #3 P-29C) - to relocate indoors a certain portion of the painting and blasting that occurs outdoors at the Dry Dock (P-31) and (P-32). Painting and basting operation will still continue at the Dry Dock (P-31 & P-32).
    - Installation of Dust Collector #3 (CD-PS-14), DFE 4-24, Torit Downflo Evolution or equivalent model at Paint Hall #3 to control emission from Abrasive Blasting.
    - Installation of Dust Collector #9 (CD-PS-15), DFE 5-40/DFE 5-60 Torit Downflo Evolution or equivalent model, at Paint Hall #3 to control emission from Abrasive Blasting.
    - Installation of Dust Collector #10 (CD-PS-16), DFE 5-40/DFE 5-60 Torit Downflo Evolution or equivalent model at Paint Hall #3 to control emission from Abrasive Blasting.
    - Installation of Space Heater #1, at Paint Hall #3, Natural gas, 3.97 MMBtu.
    - Installation of Space Heater #2, at Paint Hall #3, Natural gas, 3.97 MMBtu.
    - Abrasive material throughput increase from 30,720 lb/hr to 46,080 lb/hr for Paint Hall Blasting Operation (P-30A, P-30B, and P-30C).

- Increase of Hazardous Air Pollutants (HAP) emissions limit from ship building operations from the facility except Building 763 from 72.1 tons to 121.0 tons per rolling twelve month period.
- Increase of Volatile Organic Compounds (VOC) emissions limit from ship building operations from the facility except Building 763 from 154.0 tons to 174.9 tons per rolling twelve month period.

PLAN APPROVAL CONDITIONS
PLAN APPROVAL NO. IP17-000074
COMPANY: PHILADELPHIA SHIPYARD. INC

This Plan Approval expires on June 20, 2019. If construction or modification has not been completed by this date, an application for either an extension or new plan approval must be made. The conditions of this Plan Approval will remain in effect until they are incorporated in an operating permit.

This Plan Approval is subject to conditions prescribed in the attachment.

Edward Wiener
Chief of Source Registration
(215) 685-9426

PLAN APPROVAL CONDITIONS
PLAN APPROVAL NO. IP17-000074
COMPANY: PHILADELPHIA SHIPYARD. INC

1. All units covered by this Plan Approval shall be installed, operated and maintained in accordance with both the manufacturer's specifications and the specifications in the application (as approved herein).

Facility

2. Nitrogen Oxides (NOx) emissions from the facility except Building 763 shall be less than 24.5 tons per rolling 12 month period. [25 Pa Code §127.448 – Plant wide Applicability Limit (PAL) - AMS Plan Approval 02049 and 02135 dated 1/6/2003]
3. The facility wide emission from Paint hall P-29A, P-29B, P-31(Dry Dock Painting) and P-29C (New Paint Hall #3), blasting operations (P-32) and all other sources at the facility except Building 763 shall not exceed the following emission limits:
   (a) Carbon monoxide emissions shall not exceed 11.0 tons per rolling 12 month period.
   (b) Hazardous Air Pollutant (HAPs) emissions shall not exceed 121.0 tons per rolling 12 month period. [Application]
   (c) Particulate Matter (PM_{10}) emissions shall not exceed 89.0 tons per rolling 12-month period.
   (d) Sulfur Dioxide (SO_2) emissions shall not exceed 0.2 tons per rolling 12-month period.
   (e) Volatile Organic Compounds (VOC) emissions shall not exceed 174.9 tons per rolling 12-month period. [Application]
4. Total combined emissions from the following sources in Building 763 may not exceed the following emission limits below: [AMS Plan Approval 00153 dated 12/12/00 originally to Prime Plate Industries and reissued 8/14/2006 to Aker Philadelphia Shipyard and AMS Plan Approval No. 14218 dated 01/26/2015]

   Source Name/(Source ID)
   Building 763 Abrasive Blasting Machine (P-48)
   Building 763 Abrasive Blasting Machine Dust Collector (CD-AB-13)
   Building 763 Pre Heater (CU-45)
   Building 763 Paint Booth (P-47)
   Building 763 Cure Oven (CU-46)
   Building 763 Catalytic Oxidizer (CD-PB-12)

   (a) Carbon monoxide emissions shall not exceed 8 tons per rolling 12 month period.
   (b) Hazardous Air Pollutants (HAPs) shall not exceed 2.8 tons per rolling 12 month period for combined or any singular HAP. [AMS Plan Approval No. 14218 dated 01/26/2015]
   (c) Nitrogen Oxides (NOx) emissions shall not exceed 10 tons per rolling 12 month period.
   (d) Particulate Matter (PM/PM_{10}) emissions shall not exceed 3 tons per rolling 12-month period.
   (e) Sulfur Dioxide (SO_2) emissions shall not exceed 8.0 tons per rolling 12-month period
   (f) Volatile Organic Compounds (VOC) shall not exceed 5 tons per rolling 12-month period. [Title V Renewal, December 24, 2008 facility request. [Assures compliance with AMS Plan Approval 00153 dated 12/12/00 originally to Prime Plate Industries and reissued 8/14/2006 to Aker Philadelphia Shipyard. Also, AMS Plan Approval 14218 issued 1/26/2015]
5. The Permittee may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following: [25 Pa Code §123.41]
   (a) Equal to or greater than 20% for a period or periods aggregating more than three (3) minutes in any one hour.
   (b) Equal to or greater than 60% at any time.

6. The Permittee may not permit fugitive particulate matter to be emitted from any source into the outdoor atmosphere if the emissions are visible at the point the emissions pass outside the person's property. [25 Pa Code §123.2]

7. The Permittee shall take the necessary measures to assure no visible fugitive particulate matter emissions leave the plant boundary. [25 Pa Code §123.2]

Painting Operations

8. Particulate matter emissions from each exhaust stack into the outdoor atmosphere may not exceed 0.04 grain per dry standard cubic foot. [25 Pa Code §123.13(c)(1) & AMR II Sec VII]

9. *LAER:* In accordance with 25 Pa Code §129.51, the Permittee is authorized to demonstrate compliance with 25 Pa Code §129.52 requirements on a 24-hour basis. The applicable 25 Pa Code §129.52 standard is 800 grams of VOC per liter of coating solids. [25 Pa Code §129.52(b)(1) for Miscellaneous Metal Parts and Products. assures compliance with the provisions specified in AMS Plan Approval 99038 issued 6/24/99]

   (a) The VOC content of the as applied coating, expressed in units of weight of VOC per volume of coating solids, shall be calculated as follows: [25 Pa Code §129.52(b)(1)(i)]

   $VOC = (W_o)(D_c)/V_n$

   Where:

   VOC = VOC content in grams VOC/liter of coating solids

   W_o = Weight percent of VOC (W_v-W_w-W_{ex})

   W_v = Weight percent of total volatiles (100% - weight percent solids)

   W_w = Weight percent of water

   W_{ex} = Weight percent of exempt solvents(s)

   D_c = Density of coating, g/l, at 25^o C

   V_n = Volume percent of solids of the as applied coating

10. *LAER/MACT:* The VOC/Volatile Organic HAP (VOHAP) limits for each marine coating category applied at the facility are as follows: [40 CFR 63.783(a) and CFR 63 Subpart II, Table 2, assures compliance with AMR V, Section XV]

Coating category	**VOC/VOHAP limits**		
	Grams/liter coating(minus water and exempt compounds)	**Grams/liter solids**	
		t >= 4.5 ° C	**t < 4.5 ° C (dry dock only)**
General use	340/340	571/571	728/728
Specialty:			
Air flask	340/340	571/571	728/728
Antenna	340/530	571/1439	0/0
Antifoulant	400/400	765/765	971/971
Heat resistant	420/420	841/841	1,069/1,069
Extreme high gloss	420/420	841/841	1,069/1,069
High-gloss	340/420	571/841	728/1,069
High-temperature	500/500	1,237/1,237	1,597/1,597
Inorganic zinc high-build	340/340	571/571	728/728

Military Exterior	340/340	571/571	728/728
Mist	610/610	2,235/2,235	0/0
Navigational Aids	340/550	571/1,597	0/0
Nonskid	340/340	571/571	728/728
Nuclear	420/420	841/841	1,069/1,069
Organic zinc	340/360	571/630	728/802
Pretreatment wash primer	420/780	841/11,095	0/0
Repair and maint. of thermoplas	340/550	571/1,597	0/0
Rubber camouflage	340/340	571/571	728/728
Sealant for thermal aluminum	610/610	2,235/ 2,235	0/0
Special marking	420/490	841/1,178	0/0
Specialty interior	340/340	571/571	728/728
Tack coat	610/610	2,235/2,235	0/0
Under sea weapons systems	340/340	571/571	728/728
Weld-through precon primer	650/650	2,885/2,885	0/0

(a) The above VOC/VOHAPS limits are expressed in two sets of equivalent units, grams/liter coating (minus water and exempt compounds) or grams/liter solids. Either set of limits may be used for the compliance procedure described in 40 CFR 63.785(c)(1), but only the limits expressed in units of g/L solids (nonvolatiles) shall be used for the compliance procedures described 40 CFR 63.785(c)(2) through (3). [40 CFR 63 Subpart II Table 2[a]]

(b) VOC (including exempt compounds listed as HAP) shall be used as a surrogate for VOHAP for those compliance procedures described in 40 CFR 63.785(c)(1) through (3). [40 CFR 63 Subpart II Table 2[b]]

Abrasive Blasting Operations and Dust Collectors

11. Particulate matter emissions from dust collector #3, #9 & #10 shall not exceed 0.04 grain per dry standard cubic foot. [25 Pa Code §123.13(c)(1) & AMR II Sec VII]

Space Heaters

12. Particulate matter emissions from Space Heater #1 and #2 may not exceed 0.10 lbs/MMBTU. [AMR II Sec. V.2]

13. Carbon Monoxide (CO) emissions from Space Heater #1 and #2 may not exceed 1% by volume of exhaust gases. [AMR VIII]

Work Practice Standards

Painting Operations

14. Each Paint Hall filter shall be in operation whenever painting occurs in that individual Paint Hall.

15. The Permittee shall install, operate, and maintain a continuous weather station equipped with an alarm system at the Dry Dock. [AMS Plan Approval 99038 issued 6/24/99]

16. All exterior ship painting operations shall be protected with a containment system such as but not limited to the semi-permanent shelter identified in the plan approval application for AMS Plan Approval 14218 to control particulate matters generated from overspray. When the wind speed

measured by the weather station at the Dry Dock or the area adjacent to the Dry Dock which temporary painting operations are being conducted exceeds 25 miles per hour, the Permittee shall stop all spray painting operation on the exterior of the ship until the wind speed is less than or equal to 25 miles per hour. [AMS Plan Approval 99038 issued 6/24/99 and AMS Plan Approval 14218 issued 1/26/2015.]

17. *LAER:* The Permittee shall not use more than 10% of its total coating on a twelve month rolling period for the Extreme High Gloss Coating category (coating which achieves at least 95 percent reflectance on a 60o meter when tested by ASTM Method D-523). [AMS Plan Approval 99038 issued 6/24/99]
    (a) Surface cleaning:
        (I) The cleaning material contains 200 grams or less of VOC per liter of material; or
        (II) The cleaning material has an initial boiling point of 190°C (374°F) or greater; or
        (III) The cleaning material has a total vapor pressure of VOC of 20 mm Hg or less, at 20°C (68°F).
    (b) Surface Preparation:
        (I) The material contains 200 grams or less of VOC per liter of material;
        (II) The material has an initial boiling point of 190° C (374°F) or greater; or
        (III) The material has a total vapor pressure of VOC of 45 mm Hg or less, at 20° C (68° F).

18. The Permittee shall ensure that the following coating operating practices are in effect at all times: [AMS Plan Approval 99038 issued 6/24/99 and AMS Plan Approval No. 00153 issued 12/12/00 originally to Prime Plate Industries and reissued 8/14/2006 to Aker Philadelphia Shipyard]
    (a) Airless spray guns or equivalent applications that meet the minimum of 70% transfer efficiency are used for coating process.
    (b) All handling and transfer of VOC/VOHAP-containing materials to and from containers, tanks, vats, drums, and piping systems is conducted in a manner that minimizes spills. [40 CFR 63.783(b)(1)]
    (c) All containers, tanks, vats, drums, and piping systems are free of cracks, holes, and other defects and remain closed unless materials are being added to or removed from them. [40 CFR 63.783(b)(2)]
    (d) Institute a procedure which controls the distribution of VOC containing thinner and solvent within the facility. The provided thinner used in each batch of coatings shall not exceed the established maximum allowable thinner ratio calculated in accordance with 40 CFR 63.785(c)(2).
    (e) Paint line and spray guns must be cleaned in a closed system that is able to recirculate and collect spent solvent during the cleaning process for proper disposal; and;
    (f) Waste paint, spent solvent, solvent contaminated rag or materials, and sludge from gun cleaners must be stored in gasket sealed containers until properly disposed.

Abrasive Blasting Operations and Dust Collectors

19. The Permittee shall install, operate, and maintain continuous monitors for differential pressure on each dust collector.

20. The Permittee shall operate the dust collectors whenever the abrasive blasting equipment is in operation.

21. The Permittee shall install, operate, and maintain a continuous weather station equipped with an alarm system at the Dry Dock. [AMS Plan Approval 99038 dated 6/24/99]

22. The area in the Dry Dock in which abrasive blasting operations are being conducted on the exterior of the ship shall be protected with a containment system to control particulate matters generated from abrasive blasting. When the wind speed measured by the weather station at the dry dock exceeds 25 miles per hour, the Permittee shall stop all abrasive blasting on the exterior of the ship until the wind speed is less than or equal to 25 miles per hour. [AMS Plan Approval 14218 dated 1/26/2015]

23. The total abrasive material throughput shall not exceed 46,080 Ib/hr for the total blasting operations of the Paint Halls (P-30A, P-30B, and P-30C).

24. Each Abrasive Blasting unit shall operate less than 2880 hours per rolling 12-month period. [AMS Plan Approval 12086 dated 7/23/2012]

Space Heaters

25. Space Heater #1 and #2 shall only burn natural gas.

26. The Permittee shall install Space Heater #1 and #2 in accordance with the manufacturer's specifications and the specifications in the application (as approved herein).

Testing Requirement

Painting Operations

27. For determining compliance with VOHAP limits, when a coating or thinner contains exempt compounds that are volatile HAP or VOHAP, the Permittee shall ensure, when determining the VOC content of a coating, that the mass of these exempt compounds is included. [40 CFR 63.786(a)]

28. The Permittee shall certify the as-supplied VOC content of each batch of coating. The Permittee may use a certification supplied by the manufacturer for the batch, although the Permittee retains liability should subsequent testing reveal a violation. If the Permittee performs the certification testing, only one of the containers in which the batch of coating was received is required to be tested. [40 CFR 63.785(a)(2)]

29. In lieu of testing each batch of coating, as applied,
    (a) The Permittee may determine compliance with the VOHAP limits using any combination of the procedures described in 40 CFR 63.785(c)(1), (c)(2), (c)(3), and (c)(4). The procedure used for each coating shall be determined and documented prior to application. [40 CFR 63.785(b)(1)]
    (b) The results of any compliance demonstration conducted by the Permittee or any regulatory agency using Method 24 shall take precedence over the results using the procedures in 40 CFR 63.785(c)(1), (c)(2), or (c)(3). [40 CFR 63.785(b)(2)]
    (c) The results of any compliance demonstration conducted by the Permittee or any regulatory agency using an approved test method to determine VOHAP content shall take precedence over the results using the procedures in 40 CFR 63.785(c)(4). [40 CFR 63.785(b)(3)]
        (I) *Coatings to which thinning solvent will not be added.* For coatings to which thinning solvent (or any other material) will not be added under any circumstance or to which only

water is added, The Permittee of an affected source shall comply as follows: [40 CFR 63.785(c)(1)]

(A) Certify the as-applied VOC content of each batch of coating. [40 CFR 63.785(c)(1)(i)]

(B) Notify the persons responsible for applying the coating that no thinning solvent may be added to the coating by affixing a label to each container of coating in the batch or through another means described in the implementation plan required in §63.787(b). [40 CFR 63.785(c)(1)(ii)]

(C) If the certified as-applied VOC content of each batch of coating used during a calendar month is less than or equal to the applicable VOHAP limit in Condition 10 of this (either in terms of g/L of coating or g/L of solids), then compliance is demonstrated for that calendar month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60. [40 CFR 63.785(c)(1)(iii)]

(II) *Coatings to which thinning solvent will be added—coating-by-coating compliance.* For a coating to which thinning solvent is routinely or sometimes added, the Permittee shall comply as follows: [40 CFR 63.785(c)(2)]

(A) Prior to the first application of each batch, designate a single thinner for the coating and calculate the maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of 40 CFR 63 Subpart II) for each batch as follows: [40 CFR 63.785(c)(2)(i)]

$$R = \frac{(V_s)(\text{VOHAP limit}) - m_{VOC}}{D_{th}} \quad \text{Eqn. 1}$$

where:

R = Maximum allowable thinning ratio for a given batch (L thinner/L coating as supplied);

V_s = Volume fraction of solids in the batch as supplied (L solids/L coating as supplied);

VOHAP limit = Maximum allowable as-applied VOHAP content of the coating (g VOHAP/L solids);

M_{VOC} = VOC content of the batch as supplied [g VOC (including cure volatiles and exempt compounds on the HAP list)/L coating (including water and exempt compounds) as supplied];

D_{th} = Density of the thinner (g/L).

If V_s is not supplied directly by the coating manufacturer, the Permittee shall determine V_s as follows:

$$V_s = 1 - \frac{m_{volatiles}}{D_{avg}} \quad \text{Eqn. 2}$$

where:

$m_{volatiles}$ = Total volatiles in the batch, including VOC, water, and exempt compounds (g/L coating); and

D_{avg} = Average density of volatiles in the batch (g/L).

The procedures specified in 40 CFR 63.786(d) may be used to determine the values of variables defined in this paragraph. In addition, the Permittee may choose to construct nomographs, based on Equation 1 of 40 CFR 63 Subpart II, similar or identical to the one provided in appendix B of 40 CFR 63 Subpart II as a means of easily estimating the maximum allowable thinning ratio.

(B) Prior to the first application of each batch, notify painters and other persons, as necessary, of the designated thinner and maximum allowable thinning ratio(s) for each batch of the coating by affixing a label to each container of coating or through another means described in the implementation plan required in §63.787(b). [40 CFR 63.785(c)(2)(ii)]

(C) By the 15th day of each calendar month, determine the volume of each batch of the coating used, as supplied, during the previous month. [40 CFR 63.785(c)(2)(iii)]

(D) By the 15th day of each calendar month, determine the total allowable volume of thinner for the coating used during the previous month as follows: [40 CFR 63.785(c)(2)(iv)]

where:

$$V_{th} = \sum_{i=1}^{n} \left(R \times V_b\right)_i + \sum_{i=1}^{n} \left(R_{cold} \times V_{b-cold}\right)_i \quad \text{Eqn. 3}$$

V_{th} = Total allowable volume of thinner for the previous month (L thinner);

V_b = Volume of each batch, as supplied and before being thinned, used during non-cold-weather days of the previous month (L coating as supplied);

R_{cold} = Maximum allowable thinning ratio for each batch used during cold-weather days (L thinner/L coating as supplied);

$V_{b\text{-}cold}$ = Volume of each batch, as supplied and before being thinned, used during cold-weather days of the previous month (L coating as supplied);

I = Each batch of coating; and

n = Total number of batches of the coating.

(E) By the 15th day of each calendar month, determine the volume of thinner actually used with the coating during the previous month. [40 CFR 63.785(c)(2)(v)]

(F) If the volume of thinner actually used with the coating [40 CFR 63.785 (c)(3)(v)] is less than or equal to the total allowable volume of thinner for the coating [40 CFR 63.785 (c)(3)(iv)], then compliance is demonstrated for the coating for the previous month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60. [40 CFR 63.785(c)(2)(vi)]

(III) *Coatings to which the same thinning solvent will be added—group compliance.* For coatings to which the same thinning solvent (or other material) is routinely or sometimes added, the Permittee shall comply as follows: [40 CFR 63.785(c)(3)]

(A) Designate a single thinner to be added to each coating during the month and "group" coatings according to their designated thinner. [40 CFR 63.785(c)(3)(i)]

(B) Prior to the first application of each batch, calculate the maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of 40 CFR 63 Subpart II for each

batch of coating in the group using the equations in 40 CFR 63.785(c)(2). [40 CFR 63.785(c)(3)(ii)]

(C) Prior to the first application of each "batch," notify painters and other persons, as necessary, of the designated thinner and maximum allowable thinning ratio(s) for each batch in the group by affixing a label to each container of coating or through another means described in the implementation plan required in 40 CFR 63.787(b). [40 CFR 63.785(c)(3)(iii)]

(D) By the 15th day of each calendar month, determine the volume of each batch of the group used, as supplied, during the previous month. [40 CFR 63.785(c)(3)(iv)]

(E) By the 15th day of each calendar month, determine the total allowable volume of thinner for the group for the previous month using Equation 3 of 40 CFR 63 Subpart II. [40 CFR 63.785(c)(3)(v)]

(F) By the 15th day of each calendar month, determine the volume of thinner actually used with the group during the previous month. [40 CFR 63.785(c)(3)(vi)]

(G) If the volume of thinner actually used with the group {40 CFR 63.785 (c)(3)(vi)} is less than or equal to the total allowable volume of thinner for the group {40 CFR 63.785 (c)(3)(v)}, then compliance is demonstrated for the group for the previous month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60. [40 CFR 63.785(c)(3)(vii)]

30. VOC (including exempt compounds listed as HAP) shall be used as a surrogate for VOHAP for compliance procedures described in 40 CFR 63.785(c)(1) through (3). [AMS Plan Approval 99038 issued 6/24/99]

31. For the compliance procedure described in 40 CFR 63.785(c)(4), an alternative test method capable of measuring independent VOHAP shall be used to determine compliance. The method must be submitted to and approved by the EPA. For the compliance procedure described in 40 CFR 63.785(c)(4), the EPA must approve the test method for determining the VOHAP content of coatings and thinners. As part of the approval, the test method must meet the specified accuracy limits indicated below for sensitivity, duplicates, repeatability, and reproducibility coefficient of variation each determined at the 95 percent confidence limit. Each percentage value below is the corresponding coefficient of variation multiplied by 2.8 as in the ASTM Method E180-93: Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals (incorporation by reference—see §63.14). [40 CFR 63.783(a) and 40 CFR 63.786(b)]

(a) Sensitivity. The overall sensitivity must be sufficient to identify and calculate at least one mass percent of the compounds of interest based on the original sample. The sensitivity is defined as ten times the noise level as specified in ASTM Method D3257-93: Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography (incorporation by reference—see §63.14). In determining the sensitivity, the level of sample dilution must be factored in. [40 CFR 63.786(b)(1)]

(b) Repeatability. First, at the 0.1-5 percent analyte range the results would be suspect if duplicates vary by more than 6 percent relative and/or day to day variation of mean duplicates by the same analyst exceeds 10 percent relative. Second, at greater than 5 percent analyte range the results would be suspect if duplicates vary by more than 5 percent relative and/or day to day variation of duplicates by the same analyst exceeds 5 percent relative. [40 CFR 63.786(b)(2)]

(c) Reproducibility. First, at the 0.1-5 percent analyte range the results would be suspect if lab to lab variation exceeds 60 percent relative. Second, at greater than 5 percent range the results would be suspect if lab to lab variation exceeds 20 percent relative. [40 CFR 63.786(b)(3)]

(d) Any test method should include information on the apparatus, reagents and materials, analytical procedure, procedure for identification and confirmation of the volatile species in the mixture being analyzed, precision and bias, and other details to be reported. The reporting should also include information on quality assurance (QA) auditing. [40 CFR 63.786(b)(4)]

(e) Multiple and different analytical techniques must be used for positive identification if the components in a mixture under analysis are not known. In such cases a single column gas chromatograph (GC) may not be adequate. A combination of equipment may be needed such as a GC/mass spectrometer or GC/infrared system. (If a GC method is used, the operator must use practices in ASTM Method E260-91 or 96: Standard Practice for Gas Chromatography [incorporation by reference—see §63.14].) [40 CFR 63.786(b)(5)]

32. A coating manufacturer or the Permittee may use batch formulation data as a test method in lieu of Method 24 to certify the as-supplied VOC content of a coating if the manufacturer or the Permittee has determined that batch formulation data have a consistent and quantitatively known relationship to Method 24 results. This determination shall consider the role of cure volatiles, which may cause emissions to exceed an amount based solely upon coating formulation data. Notwithstanding such determination, in the event of conflicting results, Method 24 shall take precedence. [40 CFR 63.786(c)]

33. The Permittee shall use or ensure that the manufacturer uses the form and procedures mentioned in appendix A of 40 CFR 63 Subpart II to determine values for the thinner and coating parameters used in Equations 1 and 2. The Permittee shall ensure that the coating/thinner manufacturer (or supplier) provides information on the VOC and VOHAP contents of the coatings/thinners and the procedure(s) used to determine these values. [40 CFR 63.786(d)]

Monitoring and Recordkeeping Requirements

Facility

34. The Permittee shall monitor and keep records of emissions monthly and shall maintain verification monthly that emissions do not exceed the limitations specified in Condition 2, 3(a)-(e), and 4(a)-(f) per rolling 12-month period.
    (a) NOx emissions shall be based on fuel consumption and AP-42 factors. [AMS Plan Approval 02049 and 02135 issued 01/06/03]
    (b) The monthly emission calculations used to determine the 12-month rolling emission totals, along with those supporting calculations and underlying emissions data used in those calculations shall be available for review within 31 days of the close of the month. [Administrative Order and Consent Agreement effective 10/7/11]
    (c) VOC and HAP emissions from Painting Operations shall be determined using material balance calculations based on material usage and VOC and HAP content. The Permittee shall monitor and record these emissions in accordance with Conditions 9 and 27-33 of this plan approval and the November 2003 NESHAP Implementation Plan or successor MACT Implementation Plan approved by both AMS and EPA.

Painting Operations

35. The proper operation of the filters in accordance with manufacturer's recommended operations and maintenance. The particulate filters manufacturer’s recommended operation and maintenance requirements are summarized in manuals that shall be maintained at the maintenance offices at the facility.

36. For each batch of coating that is received, the Permittee shall determine the coating category and the applicable VOHAP limit as specified in Condition 10. [40 CFR 63.785(a)(1)]

37. The Permittee shall comply with the applicable recordkeeping requirements in 40 CFR 63.10(a), (b), (d), and (f). [40 CFR 63.788(a)]

38. The Permittee shall keep records on a daily basis and maintain those records for a minimum of five years. At a minimum these records shall include: [40 CFR 63.788(b)(2), AMS Plan Approval 99038 issued 6/24/99 and 25 Pa Code §129.52(c)]
    (a) All documentation supporting initial notification; [40 CFR 63.788(b)(2)(i)]
    (b) A copy of the affected source's approved implementation plan; [40 CFR 63.788(b)(2)(ii)]
    (c) The volume of each low-usage-exempt coating applied.; [40 CFR 63.788(b)(2)(iii)]
    (d) Identification of the coatings used, their appropriate coating categories, and the applicable VOHAP limit; [40 CFR 63.788(b)(2)(iv)]
    (e) Certification of the as supplied VOC content of each batch of coating. [40 CFR 63.788(b)(2)(v)]
    (f) A determination of whether containers meet the standards as described in 40 CFR 63.783(b)(2); and 40 CFR 63.788(b)(2)(vi).
    (g) The results of any Method 24 of appendix A to 40 CFR part 60 or approved VOHAP measurement test conducted on individual containers of coating, as applied. [40 CFR 63.788(b)(2)(vii)]
    (h) Records of the VOC/VOHAP content for each coating as supplied, and the applicable VOC/VOHAP limit.

39. The records required by 40 CFR 63.788(b)(2) shall include additional information, as determined by the compliance procedure(s) described in 40 CFR 63.785(c) that each affected source followed: [40 CFR 63.788(b)(3), AMS Plan Approval 99038 issued 6/24/99, AMS Plan Approval No. 00153 issued 12/12/00 originally to Prime Plate Industries and reissued 8/14/2006 to Aker Philadelphia Shipyard , and 25 Pa Code §129.52(c)]
    (a) *Coatings to which thinning solvent will not be added.* The records maintained by facilities demonstrating compliance using the procedure described in 40 CFR 63.785(c)(1) shall contain the following information: [40 CFR 63.788(b)(3)(i)]
        (I) Certification of the as applied VOC/VOHAP content of each batch of coating; and [40 CFR 63.788(b)(3)(i)(A)]
        (II) Volume of each coating applied. [40 CFR 63.788(b)(3)(i)(B)]
    (b) *Coatings to which thinning solvent will be added—coating-by-coating compliance*. The records maintained by facilities demonstrating compliance using the procedure described in 40 CFR 63.785(c)(2) shall contain the following information: [40 CFR 63.788(b)(3)(ii)]
        (I) The density and mass fraction of water and exempt compounds of each thinner and the volume fraction of solids (nonvolatiles) in each batch, including any calculations. [40 CFR 63.788(b)(3)(ii)(A)]
        (II) The maximum allowable thinning ratio (or ratios, if the facility complies with the cold-weather limits in addition to the other limits specified in Table 2 of 40 CFR 63 Subpart II for each batch of coating, including calculations; [40 CFR 63.788(b)(3)(ii)(B)]
        (III) If the facility chooses to comply with the cold-weather limits, the dates and times during which the ambient temperature at the affected source was below 4.5°C (40°F) at the time the coating was applied and the volume used of each batch of the coating, as supplied, during these dates; [40 CFR 63.788(b)(3)(ii)(C)]

(IV) Identification of each group of coatings and designated thinners. [40 CFR 63.788(b)(3)(ii)(D)]
(V) The volume used for each batch of the coating, as supplied. [40 CFR 63.788(b)(3)(ii)(E)]
(VI) The total allowable volume of thinner for each coating, including calculations; and. [40 CFR 63.788(b)(3)(ii)(F)]
(VII) The actual volume of thinner used for each coating. [40 CFR 63.788(b)(3)(ii)(G)]

(c) *Coatings to which the same thinning solvent will be added—group compliance*. The records maintained by facilities demonstrating compliance using the procedure described in 40 CFR 63.785(c)(3) shall contain the following information: [40 CFR 63.788(b)(3)(iii)]

(I) The density and mass fraction of water and exempt compounds of each thinner and the volume fraction of solids in each batch, including any calculations; [40 CFR 63.788(b)(3)(iii)(A)]
(II) The maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of 40 CFR 63 Subpart II) for each batch of coating, including calculations; [40 CFR 63.788(b)(3)(iii)(B)]
(III) If an affected source chooses to comply with the cold-weather limits, the dates and times during which the ambient temperature at the affected source was below 4.5°C (40°F) at the time the coating was applied and the volume used of each batch in the group, as supplied, during these dates; [40 CFR 63.788(b)(3)(iii)(C)]
(IV) Identification of each group of coatings and their designated thinners; [40 CFR 63.788(b)(3)(iii)(D)]
(V) The volume used of each batch of coating in the group, as supplied; [40 CFR 63.788(b)(3)(iii)(E)]
(VI) The total allowable volume of thinner for the group, including calculations [40 CFR 63.788(b)(3)(iii)(F)]
(VII) The actual volume of thinner used for the group. [40 CFR 63.788(b)(3)(iii)(G)]
(VIII) The daily average weight of VOC in grams per liter of total coatings and thinners used.
(IX) The name of each solvent and its associated vapor pressure.
(X) Total cleaning solvent purchase, usage and removal.
(XI) Daily integrity inspection record of VOC containers.
(XII) Certified Product Data Sheets (CPDS) for each coating used in the facility shall be maintained at the Facility for review by AMS, for five (5) years. Each CPDS shall set forth the HAP content of the coating and be signed by a representative of the coating manufacturer with the statement that “I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this form are true, accurate, and complete” or similar. [Administrative Order and Consent Agreement effective 10/7/11]
(XIII) Training certifications for all painters working at the Facility shall be kept on site, and be available for inspection by AMS, for five (5) years. [Administrative Order and Consent Agreement effective 10/7/11]
(XIV) The Permittee shall keep records of all certifications or tests demonstrating the transfer efficiency of spray guns.

40. If the Permittee detects a violation of the standards specified in 40 CFR 63.783, the Permittee shall, for the remainder of the reporting period during which the violation(s) occurred, include the following information in his or her records: [40 CFR 63.788(b)(4)]

(a) A summary of the number and duration of deviations during the reporting period, classified by reason, including known causes for which a Federally-approved or promulgated exemption from an emission limitation or standard may apply. [40 CFR 63.788(b)(4)(i)]

(b) Identification of the data availability achieved during the reporting period, including a summary of the number and total duration of incidents that the monitoring protocol failed to perform in accordance with the design of the protocol or produced data that did not meet minimum data accuracy and precision requirements, classified by reason. [40 CFR 63.788(b)(4)(ii)]

(c) Identification of the compliance status as of the last day of the reporting period and whether compliance was continuous or intermittent during the reporting period. [40 CFR 63.788(b)(4)(iii)]

(d) If, pursuant to 40 CFR 63.788(b)(4)(iii), the Permittee identifies any deviation as resulting from a known cause for which no Federally-approved or promulgated exemption from an emission limitation or standard applies, the monitoring report shall also include all records that the source is required to maintain that pertain to the periods during which such deviation occurred and: [40 CFR 63.788(b)(4)(iv)]

(I) The magnitude of each deviation; [40 CFR 63.788(b)(4)(iv)(A)]

(II) The reason for each deviation; [40 CFR 63.788(b)(4)(iv)(B)]

(III) A description of the corrective action taken for each deviation, including action taken to minimize each deviation and action taken to prevent recurrence; and [40 CFR 63.788(b)(4)(iv)(C)]

(IV) All quality assurance activities performed on any element of the monitoring protocol. [40 CFR 63.788(b)(4)(iv)(D)]

Abrasive Blasting Operations and Dust Collectors

41. The Permittee shall perform, at a minimum, daily inspections of each particulate filter system and shall monitor and keep records of the differential pressure from each inspection.

42. The differential pressure shall not exceed 14 inches of water for each particulate filter in the semi-permanent shelter identified in the plan approval application for AMS Plan Approval 14218 under the Dry Dock – Painting Operations (Source P-31). [AMS Plan Approval 14218 issued 1/26/2015]

43. The Permittee shall log the differential pressure from each daily minimum inspection of each system. This log shall also contain the dates when each filter medium is replaced. [AMS Plan Approval 99038 issued 6/24/99]

44. The Permittee shall keep daily inspection records of fugitive emissions at the Dry Dock. [AMS Plan Approval 99038 issued 6/24/99]

Space Heaters

45. The Permittee shall monitor and record monthly natural gas usage. The monthly fuel usage for Space Heater #1 and #2 may be based on the total natural gas usage for the three paint halls or may be allocated based on the maximum firing rate and operating hours of Space Heater #1 and #2.

Facility

46. Paint Halls P-29A, P-29B, P-29C and the Dry Dock Painting (P-31) are considered a single source for Nonattainment New Source Review (NNSR) purposes. Modifying the painting operations at any of the Paint Halls or the Dry Dock in the future will be considered a modification under NNSR of all

painting operations.